CURRICULUM VITAE

PROF. DR. MARTIN RAUBAL

Swiss Federal Institute of Technology, ETH Zurich
Dept. Civil, Environmental and Geomatic Engineering
Institute of Cartography and Geoinformation

Current Affiliation

Professor for Geoinformation Engineering
ETH Zurich
Dept. Civil, Environmental and Geomatic Engineering
Institute of Cartography and Geoinformation

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Personal

Nationality: Austrian
Date of Birth: 11 September 1968
Place of Birth: Vienna, Austria
Status: Married, 2 children
Languages: German, English, Italian (beginner's level)

Education

Habilitation (Venia legendi in Geoinformatics), University of Münster, Germany, 2006
Thesis title: Cognitive Engineering for Geoinformatics

Dr. techn., Institute for Geoinformation, Vienna University of Technology, Austria, 2001 (with honors)
Thesis title: Agent-based Simulation of Human Wayfinding: A Perceptual Model for Unfamiliar Buildings
Advisors: Andrew U. Frank, Werner Kuhn

Dipl.-Ing. (M.S.), Surveying Engineering, Vienna University of Technology, Austria, 1998
Advisor: Andrew U. Frank

M.S., Spatial Information Science and Engineering, University of Maine, U.S.A., 1997
GPA: 4.0
Thesis title: Structuring Wayfinding Tasks with Image Schemata
Advisors: Max J. Egenhofer, M. Kate Beard-Tisdale, Werner Kuhn, and Andrew U. Frank

Professional Appointments

Apr. 2011 –	Full Professor for Geoinformation Engineering Swiss Federal Institute of Technology, ETH Zurich, Switzerland
2016 –	Deputy Academic Director of MAS (Master of Advanced Studies) Future Mobility, ETH Zurich
Jun. 2014 –	Co-Chair of AGILE (Association of Geographic Information Laboratories for Europe) Council
Oct. 2011 –	Member of the Energy Science Center, ETH Zurich
Mar. 2011 –	Adjunct Professor Department of Geography University of California, Santa Barbara, U.S.A.
2008 – 2011	Associate Professor Department of Geography University of California, Santa Barbara, U.S.A.
2008 –	Affiliated faculty member Department of Computer Science University of California, Santa Barbara, U.S.A.
2007 –	Faculty member of Cognitive Science Program University of California, Santa Barbara, U.S.A.
2006 – 2008	Assistant Professor Department of Geography University of California, Santa Barbara, U.S.A.
2005 – 2006	Junior Professor (W1) Institute for Geoinformatics University of Münster, Germany
2004 – 2005	Assistant Professor (C1) Institute for Geoinformatics University of Münster, Germany
Oct. 2003 – Sep. 2004	Substitute Associate Professor (C3) Institute for Geoinformatics University of Münster, Germany
2002 – 2003	Assistant Professor (C1) Institute for Geoinformatics University of Münster, Germany
1998 – 2002	(Graduate) Research Assistant Institute for Geoinformation Vienna University of Technology, Austria
1996 – 1997	Graduate Research Assistant National Center for Geographic Information and Analysis (NCGIA) and Department of Spatial Information Science and Engineering University of Maine, U.S.A.

1995 – 1996	Teaching Assistant Department of Geoinformation Vienna University of Technology, Austria

Awards and Honors

2016	Innovation Lecturer (INNOLEC) at Masaryk University, Brno, Czech Republic
2015	Mobiscool Workshop (at MobileHCI 2015 Conference) Best Paper Award for "An evaluation method for location-based mobile learning based on spatio-temporal analysis of learner trajectories" (Sailer, Kiefer, Schito, Raubal)
2010	ACM GIS 2010 Best Fast Forward Presentation Runners Up for "Time Geography Inverted: Recognizing Intentions in Space and Time" (Kiefer, Raubal, and Schlieder)
2010	AGILE 2010 Best Paper Award for "A Spatio-Temporal Model Towards Ad-Hoc Collaborative Decision-Making" (Raubal and Winter)
2008	U.V. Helava Award (SFr. 10,000) for the period 2004-2007 for "Time geography for ad-hoc shared-ride trip planning in mobile geosensor networks" (Raubal, Winter, Teßmann, and Gaisbauer)
2008	ISPRS Journal 2007 Best Paper Award for "Time geography for ad-hoc shared-ride trip planning in mobile geosensor networks" (Raubal, Winter, Teßmann, and Gaisbauer)
2005	Intergraph Award (1,000$) for most innovative research paper at AGILE 2005 ("Mappings for Cognitive Semantic Interoperability")
2003	AGILE 2003 Best Paper Award for "Implementing Semantic Reference Systems" (Kuhn and Raubal)
2003	Intergraph GeoMedia Education Grant (to Institute for Geoinformatics, University of Münster) based on 'Finding suitable locations for airports in Germany' and 'Skill building lesson plans' from Introduction to Digital Cartography course 2002
1997	Award for Outstanding Academic Achievement, University of Maine
1996, 1997	Research Assistantship, funded by the National Center for Geographic Information and Analysis (NCGIA), U.S.A.
1996	Scholarship for scientific work in a foreign country, Austrian Government

Professional Activities

2018	General Chair of LBS 2018 – 14th International Conference on Location Based Services (Zurich, Switzerland)
2017	Member of program committee of COSIT 2017 – 13th International Conference on Spatial Information Theory (L'Aquila, Italy)

2017	Member of program committee of 20th AGILE International Conference on Geographic Information Science (Wageningen, Netherlands)
2017	Member of program committee of 15th International Symposium on Web and Wireless Geographical Information Systems, W2GIS 2017 (Shanghai, China)
2017	Member of program committee of GISOV 2017 – GIS Ostrava - Dynamics in GIScience (Ostrava, Czech Republic)
2016	Member of program committee of 13th International Conference on Location Based Services (Vienna, Austria)
2016	Member of program committee of GIScience 2016 – 9th International Conference on Geographic Information Science (Montreal, Canada)
2016	Member of program committee of 6th International Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction (PETMEI), (within UbiComp 2016, Heidelberg, Germany)
2016	Member of program committee of International Conference Spatial Cognition 2016 (Philadelphia, USA)
2016	Member of program committee of Mobile Tartu 2016 – International Conference on Mobile Data, Geography, LBS (Tartu, Estonia)
2016	Co-Chair of Session on The Changing Transportation and Mobility Landscape and their Influence on Energy Needs in Europe and North America, Workshop on Energy Futures – Europe and North America (ETH Zurich, Switzerland)
2016	Member of program committee of GISOV 2016 – GIS Ostrava - The Rise of Big Spatial Data (Ostrava, Czech Republic)
2016	Member of program committee of 19th AGILE International Conference on Geographic Information Science (Helsinki, Finland)
2016	Co-Organizer of ETH Winter School Eye Tracking - Experimental Design, Implementation, and Analysis (Congressi Stefano Franscini, Monte Verità, Ascona, Switzerland)
2015	Program Chair of COSIT 2015 – 12th International Conference on Spatial Information Theory (Santa Fe, New Mexico, U.S.A.)
2015	Member of program committee of IUI'2015 – International Conference on Intelligent User Interfaces 2015 (Atlanta, GA, U.S.A.)
2015	Member of program committee of 5th International Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction (PETMEI), (within UbiComp 2015, Osaka, Japan)
2015	Member of scientific committee of 12th International Symposium on Location-Based Services (Augsburg, Germany)
2015	Member of program committee of 5th International Workshop on Location and the Web (LocWeb 2015), (within WWW 2015, Florence, Italy)
2015	Member of program committee of 18th AGILE International Conference on Geographic Information Science (Lisbon, Portugal)

2014	Member of program committee of 2nd ACM SIGSPATIAL Workshop on MapInteraction (within ACM SIGSPATIAL 2014, Dallas, Texas, U.S.A.)
2014	Senior program committee member of ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS) 2014, Dallas, Texas, U.S.A.
2014	Member of scientific committee of 11th International Symposium on Location-Based Services (Vienna, Austria)
2014	Member of program committee of 4th International Workshop on Location and the Web (LocWeb 2014), (within CIKM 2014, Shanghai, China)
2014	Member of program committee of International Conference Spatial Cognition 2014 (Bremen, Germany)
2014	Member of program committee of GIScience 2014 – 8th International Conference on Geographic Information Science (Vienna, Austria)
2014	Member of program committee of 17th AGILE International Conference on Geographic Information Science (Castellón, Spain)
2014	Member of program committee of IUI'2014 – International Conference on Intelligent User Interfaces 2014 (Haifa, Israel)
2014	Member of program committee of GEOSummit 2014 (Berne, Switzerland)
2014	Member of scientific committee of GIS Ostrava 2014 – Geoinformatics for Intelligent Transportation (Ostrava, Czech Republic)
2013	Senior program committee member of ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS) 2013, Orlando, Florida, U.S.A.
2013	Member of program committee of Mobile Ghent 2013 (Ghent, Belgium)
2013	Invited lecturer at the International Spatial Cognition Summer Institute 2013 (ISCSI 2013), University of California, Santa Barbara, U.S.A.
2013	Member of program committee of COSIT 2013 – International Conference on Spatial Information Theory (Scarborough, North Yorkshire, UK)
2013	Member of program committee of Workshop on Geographic Human-Computer Interaction, GeoHCI 2013 (within CHI 2013, Paris, France)
2013	Member of program committee of 16th AGILE International Conference on Geographic Information Science (Leuven, Belgium)
2013	Member of program committee of Geoinformatik 2013 (Heidelberg, Germany)
2012	Senior program committee member of ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS) 2012, Redondo Beach, California, USA

2012	Member of program committee of Time-Geographic Information Science: a workshop on Time-Geography (within GIScience 2012, Columbus, Ohio, USA)
2012	Member of program committee of Workshop on Spatial Knowledge Acquisition with Limited Information Displays, SKALID 2012 (within Spatial Cognition 2012, Kloster Seeon, Germany)
2012	Member of program committee of 1st International Conference on Space, Time, and CyberGIS 2012 (Champaign-Urbana, Illinois, USA)
2012	Member of scientific committee of 9th International Symposium on Location-Based Services (Munich, Germany)
2012	Member of program committee of GIScience 2012 – 7th International Conference on Geographic Information Science (Columbus, Ohio, USA)
2012	Member of program committee of 15th AGILE International Conference on Geographic Information Science (Avignon, France)
2012	Member of program committee of Geoinformatik 2012 (Braunschweig, Germany)
2011	Invited speaker at the Copenhagen Center for Computational Social Science Inaugural Workshop (Copenhagen, Denmark).
2011	Elected as member of AGILE (Association Geographic Information Laboratories Europe) Council for 4-year term
2011	Member of program committee of ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS) 2011, Chicago, Illinois, U.S.A.
2011	Member of scientific committee of 8th International Symposium on Location-Based Services (Vienna, Austria)
2011	Co-organizer of Workshop on Cognitive Engineering for Mobile GIS (within COSIT 2011), Belfast, Maine, U.S.A.
2011	Member of program committee of COSIT 2011 – International Conference on Spatial Information Theory (Belfast, Maine, U.S.A.)
2011	Member of program committee of Geoinformatik 2011 (Münster, Germany)
2011	Member of program committee of 14th AGILE International Conference on Geographic Information Science (Utrecht, The Netherlands)
2011	Member of program committee of 22nd International Joint Conference On Artificial Intelligence (IJCAI 2011), Barcelona, Spain
2010	Invited participant at Specialist meeting on Spatio-Temporal Constraints on Social Networks (Santa Barbara, U.S.A.)
2010	Member of program committee of 3rd International Workshop on Location and the Web (LocWeb 2010), (within Internet of Things 2010, Tokyo, Japan)

2010	Invited speaker at International Symposium Cognitive Systems Engineering: Spatial Competence in Assistance - Training – Procedures (Etelsen Castle, Germany)
2010	Visiting Professor at Cognitive Systems Group, University of Bremen, Germany (June 2010)
2010	Member of program committee of GIScience 2010 – 6th International Conference on Geographic Information Science (Zurich, Switzerland)
2010	Member of program committee of Workshop On Linked Spatiotemporal Data (within GIScience 2010, Zurich, Switzerland)
2010	Member of program committee of Doctoral Colloquium, GIScience 2010 (Zurich, Switzerland)
2010	Member of program committee of Workshop Towards Digital Earth: Search, Discover and Share Geospatial Data (within Future Internet Symposium 2010, Berlin, Germany)
2010	Member of program committee of International Conference Spatial Cognition 2010 (Mt. Hood / Portland, Oregon, USA)
2010	Member of program committee of 2nd International Workshop on Spatial Awareness and Geographic Knowledge Acquisition with Small Mobile Devices (within Spatial Cognition 2010, Mt. Hood / Portland, Oregon, USA)
2010	Member of program committee of 2nd International Workshop on Theory and Applications Frontier of Location Based Services (within MUE'10, San Diego, CA, U.S.A.)
2010	Member of program committee of 13th AGILE International Conference on Geographic Information Science (Guimarães, Portugal)
2010	Member of program committee of Geoinformatik 2010 (Kiel, Germany)
2009	Invited speaker at StratAG (Strategic Research in Advanced Geotechnologies) LBS Strand Kick-off Meeting (Maynooth, Ireland)
2009	Program Co-Chair of GeoS 2009 – Third International Conference on Geospatial Semantics (Mexico City, Mexico)
2009	Tutorial organizer and lecturer—Perspectives on semantic similarity for the spatial sciences (within COSIT 2009, Aber Wrac'h, France), with A. Klippel
2009	Member of program committee of COSIT 2009 – International Conference on Spatial Information Theory (Aber Wrac'h, France)
2009	Member of program committee of Workshop on Presenting Spatial Information: Granularity, Relevance, and Integration (within COSIT'09, Aber Wrac'h, France)
2009	Member of program committee of Workshop GI@EarlyWarning (within AGILE'09, Hannover, Germany)
2009	Member of program committee of International Workshop on Theory and Applications Frontier of Location Based Services (within MUE'09, Qingdao, China)

2009	Member of program committee of 12th AGILE International Conference on Geographic Information Science (Hannover, Germany)
2009	Member of program committee of Geoinformatik 2009 – Geoinformatics – benefits for environment and society (Osnabrueck, Germany)
2008	Elected as member of UCGIS (University Consortium of Geographic Information Science) Board of Directors
2008	Member of program committee of International Conference Spatial Cognition 2008 (Freiburg, Germany)
2008	Member of program committee of International Workshop on You-Are-Here-Maps: Creating a Sense of Place through Map-like Representations (within Spatial Cognition 2008), (Freiburg, Germany)
2008	Co-organizer of First International Workshop on Information Semantics and its Implications for Geographic Analysis (within GIScience 2008), Park City, U.S.A.
2008	Co-organizer of First International Workshop on Trends in Pervasive and Ubiquitous Geotechnology and Geoinformation (within GIScience 2008), Park City, U.S.A.
2008	Member of program committee of GIScience 2008 – 5th International Conference on Geographic Information Science (Park City, U.S.A.)
2008	Member of program committee of GI-Days Münster 2008 – Interoperability and spatial processing in GI applications
2008	Invited speaker at UCTC 2008, 14th University of California Transportation Center student conference (Santa Barbara, U.S.A.)
2008	Member of program committee of 1st International Workshop on Location and the Web (LocWeb 2008), (Beijing, China)
2008	Member of program committee of 11th AGILE International Conference on Geographic Information Science (Girona, Spain)
2007	Invited speaker at 4th Junior Professors Symposium (Bremen, Germany)
2007	Member of program committee of 7th International Workshop on Web and Wireless GIS (W2GIS'07) (Cardiff, UK)
2007	Co-organizer of Workshop on Semantic Similarity Measurement and Geospatial Applications (within COSIT 2007), Mt Eliza, Melbourne, Australia
2007	Member of program committee of COSIT 2007 – Ninth International Conference on Spatial Information Theory (Mt Eliza, Melbourne, Australia)
2007	Member of review committee of Applications of Spatial Cognition for Intelligent Assistance Systems Workshop (at KI 2007 - 30th German Conference on Artificial Intelligence (Osnabrueck, Germany)
2007	Member of program committee of GI-Days 2007 – Young Researchers Forum (Münster, Germany)

2007	Member of program committee of 10th AGILE International Conference on Geographic Information Science (Aalborg, Denmark)
2007	Personal invitation to 13th German-American Frontiers of Science Symposium (Irvine, California) by Alexander von Humboldt-Foundation, Germany (in cooperation with U.S. National Academy of Sciences).
2006	Program Chair of GIScience 2006 – Fourth International Conference on Geographic Information Science (Münster, Germany)
2006	Invited speaker at 9th Austrian Surveyor's Day (Krems, Austria)
2006	Visiting Professor at the Institute for Geoinformation and Cartography, Vienna University of Technology, Austria (1 week, sponsored by Erasmus)
2006	Member of program committee of Space Syntax and Spatial Cognition Workshop (Bremen, Germany)
2006	Member of review committee of Spatial Cognition 2006 conference (Bremen, Germany)
2006	Member of program committee of 3rd CoMoGIS2006 International Workshop On Conceptual Modeling for Geographical Information Systems (Tucson, Arizona)
2006	Member of program committee of 6th International Workshop on Web and Wireless GIS (W2GIS'06) (Hong Kong, China)
2006	Member of scientific committee of MDSGEO'06 - 1st International Workshop on Modern Decision Support in Geographical Domains: Models, Methods, and Tools (Thessaloniki, Greece)
2006	Invited participant at Dagstuhl Seminar "Towards Affordance-Based Robot Control" (Dagstuhl castle, Germany)
2006	Member of program committee of AMTA'06 – First International Workshop on Agents and Multiagent Systems, from Theory to Application (Québec City, Canada)
2006	Member of program committee of AGILE Conference 2006 (Visegrad, Hungary)
2005	Invited participant at Dagstuhl Seminar "Spatial Cognition: Specialization and Integration" (Dagstuhl castle, Germany)
2005	Organizer of Workshop on Cognitive Engineering for Geospatial Services (within COSIT 2005), Ellicottville, New York (with Pragya Agarwal)
2005	Guest lecturer at the Department of Geography, University of Klagenfurt, Austria (1 week, sponsored by Erasmus)
2005	Elected as member of AGILE (Association Geographic Information Laboratories Europe) Council for 4-year term
2005	Member of program committee of COSIT 2005 – (Ellicottville, New York)

2005	Member of program committee of GI-Days Münster 2005 – Geosensor networks: from research to applications
2005	Member of program committee of AGILE Conference 2005 (Estoril, Portugal)
2004	Invited participant at NCGIA Specialist meeting on Spatial Webs (Santa Barbara, U.S.A.)
2004	Co-organizer of Workshop on the Potential of Cognitive Semantics for Ontologies (within FOIS 2004), Torino, Italy
2004	Guest lecturer at the Department of Geography, University of Klagenfurt, Austria (1 week, sponsored by Erasmus)
2004	Member of review committee of Spatial Cognition 2004 conference (Frauenchiemsee Island, Bavaria, Germany)
2004	Member of program committee of GIScience 2004 – Third International Conference on Geographic Information Science (Maryland, U.S.A.)
2004	Program Chair of GI-Days Münster 2004 – GI & Mobility
2004	Invited speaker at Euresco Conference on Geovisualisation (Crete, Greece)
2004	Member of program committee of AGILE Conference 2004 – GI in the European Research Area (Crete, Greece)
2003	Invited lecturer at the International Spatial Cognition Summer Institute, Bad Zwischenahn, Germany (sponsored by the International Quality Network on Spatial Cognition)
2003	Guest lecturer at the Department of Geography, University of Klagenfurt, Austria (1 week, sponsored by Erasmus)
2003	Euresco Conference Modeling for Wayfinding Services, Bad Herrenalb, Germany: Invited speaker
2003	Member of program committee of GI-Days Münster 2003 – Geodata- and service infrastructures: from research to applications
2002	Visitor at the Department of Geography, University of Utah, Salt Lake City (2 weeks, sponsored by DAAD, Germany)
2002	ACTOR2002 (NSF-sponsored research workshop on Action-Oriented Approaches in Geographic Information Science, Maine, U.S.A.): Invited participant
1996	NCGIA I21 - Specialist Meeting “Formal Models of Common-Sense Geographic Worlds” in San Marcos, Texas (Oct. 30th - Nov. 3rd 1996): Participant and rapporteur

Funded projects

2017 – 2020	Efficient Technologies and Systems for Mobility – Swiss Competence Center for Energy Research (Commission for Technology and Innovation; PI:

	Boulouchos; Capacity Area B1 Coordinator: Raubal) [Total funding: CHF 15.2 Mio.]	CHF 516,506
2017 – 2020	Future Swiss Electrical Infrastructure – Swiss Competence Center for Energy Research (Commission for Technology and Innovation; PI: Paolone, Co-Academic partner: Raubal) [Total funding: CHF 17 Mio.]	CHF 292,560
2016 – 2017	OMLETH II: Development of a broader application for the platform for location-based mobile learning at ETH (Innovedum fund, ETH Zurich; PI: Raubal, Manager: Kiefer)	CHF 83,330
2015 – 2018	Intention-Aware Gaze-Based Assistance on Maps (Swiss National Science Foundation; PI: Kiefer, Co-PI: Raubal)	CHF 179,308
2015 – 2017	Enhanced flight training program for monitoring aircraft automation (Federal Office of Civil Aviation; PI: Ammann, Swiss International Air Lines Ltd., Co-PI: Raubal)	CHF 333,732
2014 – 2017	GoEco! A community based eco-feedback approach to promote sustainable personal mobility styles (Swiss National Science Foundation NRP71; PI: Rudel, Co-PI: Raubal)	CHF 405,719
2014 – 2018	Infrastructure for Future Electricity Markets (Swiss National Science Foundation NRP70; PI: Demiray, Co-PIs: Raubal, Abhari)	CHF 499,900
2014 – 2017	Application of 3D Geographic Information Systems for transparent and sustainable planning of electric power systems (Swiss Federal Office of Energy, Industry; PI: Raubal)	CHF 629,800
2014 – 2016	Efficient Technologies and Systems for Mobility – Swiss Competence Center for Energy Research (Commission for Technology and Innovation; PI: Boulouchos; Capacity Area B1 Co-Coordinator: Raubal) [Total funding: CHF 10 Mio.]	CHF 424,500
2014 – 2016	Future Swiss Electrical Infrastructure – Swiss Competence Center for Energy Research (Commission for Technology and Innovation; PI: Paolone, Co-Academic partner: Raubal) [Total funding: CHF 10 Mio.]	CHF 195,000
2014 – 2015	OMLETH: A Platform for Location-Based Mobile Learning at ETH (Innovedum fund, ETH Zurich; PI: Raubal, Manager: Kiefer)	CHF 109,000
2012 – 2015	System modelling for assessing the potential of de-centralised biomass-CHP plants to stabilise the Swiss electricity network with increased fluctuating re-newable generation (swisselectric, BfE; PI: Boulouchos, Co-PIs: Raubal, Demiray, Turton)	CHF 1.050,000
2012 – 2013	Characterizing human mobility from mobile phone usage (Swiss National Science Foundation; PI: Raubal)	CHF 78,416
2012	Dwight David Eisenhower Graduate Fellowship – Yihong Yuan (U.S. Department of Transportation; PI: Raubal)	$ 5,000
2010 – 2011	The Synergy of Transportation, Social, and Data	

	Networks, Spring 2010 Dissertation Award – Edward Pultar (U.S. Department of Transportation; PI: Raubal)	$ 20,000
2009 – 2011	Geospatial Feature Conflation: Conceptual, Statistical, and Optimization Approaches (National Geospatial Intelligence Agency – NGA University Research Initiatives; PI: Goodchild, Co-PI: Raubal)	$ 288,548
2009 – 2010	A Metric Conceptual Space Algebra for the Semantic Web (Faculty Research Grant, Academic Senate, University of California, Santa Barbara; PI: Raubal)	$ 5,297
2008 – 2009	Instructional Improvement Grant: Undergraduate / Graduate Geography GIScience Course Series (Academic Senate, University of California, Santa Barbara; PIs: Clarke, Goodchild, Raubal)	$ 11,748
2006 – 2008	Semantic Similarity Measurement for Role-Governed Geospatial Categories (German Research Foundation, PI: Raubal)	€ 265,000
2006 – 2007	Novel Technologies for Spatial Decision Support (German Academic Exchange Service, PI: Raubal)	€ 10,240
2004 – 2006	Semantic Reference Systems for Geospatial Information (German Research Foundation; PI: Kuhn, Co-PI: Raubal)	€ 130,000
2004	Researcher grant (University of Münster, PI: Raubal)	€ 4,000

Active project participation

2009 – 2011	Virtual Co-laboratory for Policy Analysis in Greater L.A., Multicampus Research Programs and Initiatives Project (UC): GIS and visualization
2004 – 2006	MEDIS (Towards sustainable water use on Mediterranean Islands: addressing conflicting demands and varying hydrological, social and economic conditions) Project (EC): Project leader at ifgi
1998 – 2000	PANEL-GI (Pan European Link for Geographical Information) Project (EC): Organization and research
1998 – 1999	COMMUTER (Co-operative multi-dimensional multimedia and topological elements reintegration) Project (EC): Research

Editorship and Editorial board

Journal of Location Based Services, *Taylor & Francis* (Associate Editor since 2013; EB since 2006)
Transactions in GIS, *Blackwell* (EB since 2006)
Geography Compass, *Blackwell* (EB since 2006)
Journal of Spatial Information Science, *Open-access* (EB since 2009)
Spatial Cognition and Computation, *Taylor & Francis* (EB since 2013)
Semantic Web Journal, *IOS Press* (EB 2009 - 2012)

Referee for

Journals

International Journal of Geographical Information Science; Transactions in GIS; GeoInformatica; Spatial Cognition and Computation; ISPRS Journal of Photogrammetry and Remote Sensing; Geographical Analysis; Professional Geographer; Geography Compass; Cartography and Geographic Information Science; Cartographica; Environment & Planning B; Journal of Geographical Systems; Journal of Location-Based Services; Memory & Cognition; International Journal of Applied Earth Observation and Geoinformation; International Journal of Sustainable Transportation; IET Intelligent Transport Systems; Journal of Transport Geography; Computers, Environment and Urban Systems; Environmental Engineering Science; International Journal of Spatial Data Infrastructures Research; Data & Knowledge Engineering; Urban Planning; Tourism Geographies; Photogrammetrie, Fernerkundung, Geoinformation (PFG); Moravian Geographical Reports; gis.SCIENCE; Automation in Construction; Forestry: An International Journal of Forest Research; Künstliche Intelligenz (KI)

Conferences

Conference on Spatial Information Theory, COSIT (2003 - 2017); Conference on Geographic Information Science, GIScience (2004, 2008 - 2016); ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (2011 - 2014); International Joint Conference On Artificial Intelligence, IJCAI (2011); International Conference on Intelligent User Interfaces, IUI (2012, 2014); Conference on Human Factors in Computing Systems, CHI (2006, 2015); International Conference on Human Computer Interaction with Mobile Devices and Services, MobileHCI (2013); International Conference on Mobile and Ubiquitous Multimedia, MUM (2013); Spatial Cognition (2004 - 2012); Symposium on Location Based Services, LBS (2011 - 2016); Conference on Ubiquitous Computing, UbiComp (2003, 2008); International Conference on Geosensor Networks, GSN (2011); AGILE Conference on Geographic Information Science (2004 - 2015); Münster GI-Days (2003 - 2008); Geoinformatik (2009 - 2013); GIS Ostrava (2014 - 2017); World Council on Transportation Research (WCTR) Meeting (2007)

Organizations and Programs

U.S. National Science Foundation; Swiss National Science Foundation; Science Foundation Ireland; German Science Foundation; GEOTECHNOLOGIEN, Germany; GEOIDE, Canada; Austrian Federal Ministry of Science and Research (BMWF); Austrian Federal Ministry for Transport, Innovation and Technology (bmvit); Austrian Agency for International Cooperation in Education and Research (Sparkling Science); Korean-Swiss Science and Technology Program

University Service

2015 – 2017	Vice-Chair, Institute of Cartography and Geoinformation, ETH Zurich
2016 – 2017	Co-Director of Studies (Geomatic Engineering), ETH Zurich
2013 – 2015	Chair, Institute of Cartography and Geoinformation, ETH Zurich
2013 – 2015	Co-Director of Studies (Geomatic Engineering), ETH Zurich
2011 – 2013	Vice-Chair, Institute of Cartography and Geoinformation, ETH Zurich
2009 – 2011	Vice-Chair, Department of Geography, UCSB

2009 – 2011	Chair of Graduate Committee, Department of Geography, UCSB
2009 – 2010	Enterprise Information Systems Planning Group, UCSB
2009	Student Information System Replacement Steering Committee, UCSB
2009 – 2011	Academic Technology Planning Group, UCSB
2008 – 2010	Committee on Computing and Communications, UC
2008 – 2010	Academic Senate Council on Research and Instructional Resources, UCSB
2008 – 2010	Senate Committee on Library, Information, and Instructional Resources, UCSB
2008 – 2009	Curriculum Committee, Department of Geography, UCSB
2007 – 2009	Events Committee, Department of Geography, UCSB
2007 – 2011	Graduate Committee, Department of Geography, UCSB
2007 – 2011	Cognitive Science Program Steering Committee, UCSB
2007 – 2009	Advisory Committee on Campus Access, UCSB
2007 – 2008	Information Systems & Services Advisory Committee, Department of Geography, UCSB
2005 – 2006	Habilitation commission, School of Geosciences, University of Münster
2005 – 2006	Examination board for Geoinformatics, Institute for Geoinformatics, University of Münster
2005 – 2006	Course coordinator, Institute for Geoinformatics, University of Münster
2004 – 2006	Board of directors, Institute for Geoinformatics, University of Münster
2003 – 2006	Student advisor for Geoinformatics, Institute for Geoinformatics, University of Münster
2003 – 2005	Ph.D. commission, School of Geosciences, University of Münster
2003 – 2004	Faculty Search Committee (C3, Geoinformatics), Institute for Geoinformatics, University of Münster
2003 – 2004	Faculty committee, School of Geosciences, University of Münster
2002 – 2003	Faculty Search Committee (C4, Geoinformatics), Institute for Geoinformatics, University of Münster

Industry Experience

1993 – 1995	Part-time work as a surveyor for the Surveying Bureau “Feuereis & Lichtenstoeger”, Austria
1987 – 1990	6 months full-time work as a surveyor for the Austrian Surveying Agency (BEV)

Teaching

Spring 2017	Geographic Information Systems II (Lecture, Undergrad)
Fall 2016	Geographic Information Systems I (Lecture, Undergrad) Geographic Information Systems III (Lecture, Grad)
Spring 2016	Geographic Information Systems II (Lecture, Undergrad)
Spring 2015	Geographic Information Systems II (Lecture, Undergrad)
Fall 2014	Geographic Information Systems I (Lecture, Undergrad) Geographic Information Systems III (Lecture, Grad)
Spring 2014	Geographic Information Systems II (Lecture, Undergrad) Geodata Analysis (Lecture, Undergrad)
Fall 2013	Geographic Information Systems I (Lecture, Undergrad) Geographic Information Systems III (Lecture, Grad)
Summer 2013	Cognitive Issues in GIS (Lecture at International Spatial Cognition Summer Institute 2013, University of California, Santa Barbara, U.S.A
Spring 2013	Geographic Information Systems II (Lecture, Undergrad)
Fall 2012	Geographic Information Systems I (Lecture, Undergrad) Geographic Information Systems III (Lecture, Grad) Mobile GIS & Location Based Services (Lecture, Grad, with Peter Kiefer)
Spring 2012	Geographic Information Systems II (Lecture, Undergrad)
Fall 2011	Geographic Information Systems I (Lecture, Undergrad) Geographic Information Systems III (Lecture, Grad)
Winter 2010	GEOG 288MR, Location Based Services (Seminar, Grad)
Summer 2010	Semantic Similarity Measurement and Spatial Applications (Seminar at University of Bremen, with Alexander Klippel)
Spring 2010	GEOG 176C, GIS Applications (Lecture & Labs, Undergrad) GEOG 596, Directed Reading & Research "Functions & Applications of Spatial Cognition" (with Dan Montello)
Winter 2009	GEOG 200B, Introduction to Geographic Research (Lecture Seminar, Grad) INT 200B, Seminar in Cognitive Science (Seminar, Grad)
Fall 2009	GEOG 183, Cartographic Design & Geovisualization (Lectures & Labs, Undergrad)
Summer 2009	Geographic Visualization (Lectures & Labs at University of Münster)
Spring 2009	GEOG 231, Cognitive Issues in Geographic Information Science (Seminar, Grad)
Winter 2008	GEOG 200B, Introduction to Geographic Research (Lecture Seminar, Grad)
Fall 2008	GEOG 183, Cartographic Design & Geovisualization (Lectures & Labs, Undergrad)

Spring 2008	GEOG 184C, Geographic Visualization (Lecture & Labs, Undergrad) GEOG 288MR, Semantic Similarity Measurement and Geographic Applications (Seminar, Grad)
Fall 2007	GEOG 176A, Intro to GIS (Lecture & Labs, Undergrad) GEOG 118, Cartographic Design (Lecture & Labs, Undergrad)
Spring 2007	GEOG 184C, Geographic Visualization (Lecture & Labs, Undergrad) GEOG 288MR, Time in GIS (Seminar, Grad)
Winter 2006	GEOG 596, Directed Reading & Research "Applied Spatial Cognition" (with Dan Montello) GEOG 597, Independent Study – PhD Exam Introduction to Digital Cartography (Labs, 1st year)
Summer 2006	Introduction to Digital Cartography (Labs, 2nd year) Pedestrian navigation services (Study project, 4th year) Introduction to Geographic Information Science (Lecture part, 3rd year) Semantics and Ontologies in Geographic Information Services – Theory and Applications (Lecture & Labs at Vienna University of Technology; with M. Lutz)
Winter 2005	Cognitive Aspects in Geographic Information Science (Seminar, 4th year) Pedestrian navigation services (Study project, 4th year) Dynamic route planning (Labs, 4th year)
Summer 2005	Introduction to Research Methods (Seminar, 4th year) Introduction to Digital Cartography (Labs, 2nd year) Semantics and Ontologies in Geographic Information Services – Theory and Applications (Workshop at University of Klagenfurt; with M. Lutz and M. Hall)
Winter 2004	Time in GIS (Seminar, 4th year) Introduction to Geoinformatics (Labs and lecture part, 2nd year)
Summer 2004	Introduction to Research Methods (Seminar, 4th year) Introduction to Digital Cartography (Labs, 2nd year) Mobile Geocomputing (Labs at University of Klagenfurt, 2nd year)
Winter 2003	Cognitive Aspects in Geographic Information Science (Seminar, 4th year) Introduction to Geoinformatics (Labs and lecture part, 2nd year) Introduction to Digital Cartography (Labs, 2nd year)
Summer 2003	Cognitive Aspects of Wayfinding (Lecture at Int. Spatial Cognition Summer Institute; with H. Hochmair and S. Timpf) Evaluation of GIS (Lecture at University of Klagenfurt, 2nd year) Evaluation of GIS (Seminar, 4th year) Introduction to Digital Cartography (Labs and lecture part, 2nd year)
Winter 2002	Spatial Cognition and Wayfinding (Seminar, 4th year) Introduction to Geoinformatics (Labs, 2nd year)
Summer 2002	Introduction to Digital Cartography (Labs and lecture part, 2nd year)
Winter 2001	Evaluation of GIS (Lectures & Labs, 5th year) Introduction to GIS (Labs, 2nd year) Spatial Information Systems (Labs, 3rd year)

	Geographic Information Systems for Computer Scientists (Labs) Spatial Information Systems – Field Camp (Analysis, 4th year)
Summer 2001	Geometric Data Management (Labs, 4th year) Geographic Information Systems for Computer Scientists (Labs) Public domain Geographic Information Systems (Labs, 4th year)
Winter 2000	Evaluation of GIS (Lectures & Labs, 5th year) Spatial Information Systems (Labs, 3rd year) Geographic Information Systems for Computer Scientists (Labs) Spatial Information Systems – Field Camp (Analysis, 4th year) Temporal Data for Geographic Information Systems (Labs, 4th year)
Summer 2000	Geometric Data Management (Labs, 4th year) Geographic Information Systems for Computer Scientists (Labs)
Winter 1999	Spatial Information Systems (Labs, 3rd year) Geographic Information Systems for Computer Scientists (Labs)
Summer 1999	Geometric Data Management (Labs, 4th year) Geographic Information Systems for Computer Scientists (Labs)
Winter 1995	Spatial Information Systems – Field Camp (Analysis, 4th year, Teaching Assistant)

Ph.D. theses supervised (*: co-supervised)

1. Göbel, F. (in progress): Tbd. Institute of Cartography and Geoinformation, ETH Zurich.
2. Bucher, D. (in progress): Universal Matching of User Needs in Real-Time. Institute of Cartography and Geoinformation, ETH Zurich.
3. Schito, J. (in progress): Application of 3D Geographic Information Systems for transparent and sustainable planning of electric power systems. Institute of Cartography and Geoinformation, ETH Zurich.
4. Rudi, D. (in progress): Enhancing spatial awareness in cockpits. Institute of Cartography and Geoinformation, ETH Zurich.
5. Sailer, C. (in progress): Impact of teaching with mobile spatial learning platforms in context-based and situative learning environments. Institute of Cartography and Geoinformation, ETH Zurich.
6. Buffat, R. (in progress): Spatial location optimization of biogas production plants and a biogenic CHP swarm in Switzerland. Institute of Cartography and Geoinformation, ETH Zurich.
7. Giannopoulos, I. (2016): Supporting Wayfinding Through Mobile Gaze-Based Interaction. Institute of Cartography and Geoinformation, ETH Zurich.
   Current occupation: Postdoctoral Researcher, Institute of Cartography and Geoinformation, ETH Zurich.
8. Grassi, S. (2016): An integrated spatial optimization model for renewable energy. Institute of Cartography and Geoinformation, ETH Zurich.
   Current occupation: Postdoctoral Researcher, Institute of Cartography and Geoinformation, ETH Zurich.

9. *McKenzie, G. (2015): A Temporal Approach to Defining Place Types based on User-Contributed Geosocial Content. Department of Geography, University of California, Santa Barbara, U.S.A. (co-supervised with K. Janowicz)
Current occupation: Assistant Professor, Department of Geographical Sciences, University of Maryland, College Park, U.S.A.

10. Yuan, Y. (2013): Characterizing human mobility from mobile phone usage. Department of Geography, University of California, Santa Barbara, U.S.A.
Current occupation: Assistant Professor, Department of Geography, Texas State University, U.S.A.

11. Adams, B. (2012): Operationalizing Place: Discovering, reasoning about, and exploring place knowledge from descriptions. Department of Computer Science, University of California, Santa Barbara, U.S.A.
Current occupation: Senior Lecturer in Geographic Information Science, Dept. of Geography, University of Canterbury, Christchurch, New Zealand.

12. *Dara-Abrams, D. (2011): The World in the Head: Measuring People's Spatial Knowledge and Travel Patterns Using Mobile Devices. Department of Geography, University of California, Santa Barbara, U.S.A. (co-supervised with D. Montello)
Current occupation: Transit & Urban Design Lead, Mapzen, San Francisco, California.

13. Pultar, E. (2011): The Role of Geography in Social Networks: CouchSurfing as a Case Study. Department of Geography, University of California, Santa Barbara, U.S.A.
Current occupation: President, Founding Partner, Geographic Information Scientist, Valarm

14. Kessler, C. (2010): Context-Aware Semantics-Based Information Retrieval. Institute for Geoinformatics, University of Münster, Germany.
Current occupation: Associate Professor for Geoinformatics, Department of Development and Planning, Aalborg University Copenhagen, Denmark

15. *Janowicz, K. (2008): Computing Semantic Similarity among Geographic Feature Types Represented in Expressive Description Logics. Institute for Geoinformatics, University of Münster, Germany (co-supervised with W. Kuhn).
Current occupation: Associate Professor, Department of Geography, University of California, Santa Barbara

Ph.D. committee member

1. Hahn, J. (2016): Context Algebra applied to Spatial Concepts. Department of Geodesy and Geoinformation, Vienna University of Technology, Austria.

2. Crease, P. (2014): Representation of Geographic Relevance in Mobile Applications. Department of Geography, University of Zürich, Switzerland.

3. Huang, H. (2013): Learning from location histories for POI recommendations in LBS. Department of Geodesy and Geoinformation, Vienna University of Technology, Austria.

4. Xiao, D. (2013): Individual and Cultural Differences in the Interpretation and Generation of Natural Language Descriptions of Spatial Layout. Department of Geography, University of California, Santa Barbara, U.S.A.

5. Simons, N. (2013): Improving Decision Making During Wildland Fire Events. Department of Geography, State University of San Diego & Department of Geography, University of California, Santa Barbara, U.S.A.
6. Deutsch, K. (2013): An Investigation in Decision Making and Destination Choice Incorporating Place Meaning and Social Network Influences. Department of Geography, University of California, Santa Barbara, U.S.A.
7. Ortmann, J. (2013): Semantic Integration of Human and Technical Observations. Institute for Geoinformatics, University of Münster, Germany.
8. Swobodzinski, M. (2012): Exploring Human Decision Making in the Context of Web-Based Public Participation in Transportation Planning. Department of Geography, State University of San Diego & Department of Geography, University of California, Santa Barbara, U.S.A.
9. Kritzler, M. (2011): Spatio-Temporal Data Analysis Framework for Moving Entities based upon Heterogeneous Tracking Systems. Institute for Geoinformatics, University of Münster, Germany.
10. Henson, K. (2011): Travel Determinants and Multi-scale Transferability of National Activity Patterns to Local Populations. Department of Geography, University of California, Santa Barbara, U.S.A.
11. Grossner, K. (2010): Representing Historical Knowledge in Geographic Information Systems. Department of Geography, University of California, Santa Barbara, U.S.A.
12. Yoon, S. Y. (2010): Impact of time-space prism accessibility on time use behavior and its propagation through intra-household interaction. Department of Geography, University of California, Santa Barbara, U.S.A.
13. Pingel, T. (2010): Strategic Elements of Route Choice. Department of Geography, University of California, Santa Barbara, U.S.A.
14. Schwering, A. (2006): Semantic Similarity Measurement including Spatial Relations for Semantic Information Retrieval of Geo-Spatial Data. Institute for Geoinformatics, University of Münster, Germany.
15. Steinicke, F. (2006): Multimodal Metaphors for Generic Interaction Tasks in Virtual Environments. Department of Computer Science, University of Münster, Germany.
16. Einspanier, U. (2006): Formal Metamodeling for the Specification and Implementation of Feature Catalogues. Institute for Geoinformatics, University of Münster, Germany.

Ph.D. examiner / opponent

1. Götze, J. (2016): Talk the walk – Empirical studies and data-driven methods for geographical natural language applications. School of Computer Science and Communication, KTH Royal Institute of Technology, Stockholm, Sweden.
2. Kettunen, P. (2014): Analysing Landmarks in Nature and Elements of Geospatial Images to Support Wayfinding. School of Engineering, Aalto University, Finland.
3. Webber, E. (2014): Strategy Differences in the use of Mobile Devices for Navigation. Engineering Faculty, The University of Nottingham, UK.

4. Sagl, G. (2012): Spatio-Temporal Analyses of Environmental and Social In Situ Sensor Data. Doctoral College Geographic Information Science, Paris Lodron University Salzburg, Austria.
5. Kiefer, P. (2011): The Mobile Intention Recognition Problem And An Approach Based On Spatially-Constrained Grammars. Faculty of Information Systems and Applied Computer Science. University of Bamberg, Germany.
6. Wang, Z. (2010): Proactive Traffic Control Strategies for Sensor-Enabled Cars. Department of Computer Science and Software Engineering. The University of Melbourne, Australia.

Master theses supervised (*: co-supervised)

1. Allemann, D. (2013): Determining usage differences between bikes and e-bikes. Institute of Cartography and Geoinformation, ETH Zurich.
2. Leu, E. (2012): Integration of travel information in a calendar application. Institute of Cartography and Geoinformation, ETH Zurich.
3. Wosniok, C. (2010): A Context-Aware Surf Spot Search Engine Based on Conceptual Spaces. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of California, Santa Barbara.
4. *McDaniel, M. (2010): Agent-Based Modeling of Lost Person Wayfinding. Department of Geography, University of California, Santa Barbara.
5. Wilkes, M. (2008): A graph-based alignment approach to context-sensitive similarity between climbing routes. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of California, Santa Barbara.
6. *Hecht, B. (2007): Utilizing Wikipedia as a Spatiotemporal Knowledge Repository. Department of Geography, University of California, Santa Barbara.
7. Espeter, M. (2007): Location-based decision support for user groups. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of California, Santa Barbara.
8. Panov, I. (2007): A Formal Model for Mobile Map Adaptation in Pedestrian Navigation. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of California, Santa Barbara.
9. *Schöning, J. (2007): Interaction of mobile devices with public paper maps. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of California, Santa Barbara.
10. Tessmann, S. (2006): Time geography for efficient shared-ride trip planning in transportation networks. Institute for Geoinformatics, University of Münster, Germany.
11. Debald, T. (2006): Optimierung nutzerspezifischer Aufgabenabläufe mit Location Based Services (Optimization of user-specific task processes with Location Based Services). Institute for Geoinformatics, University of Münster, Germany.
12. Kritzler, M. (2006): RFID-Ortungs- und Bewegungsanalyse von transgenen Mäusen zur Untersuchung der Alzheimer-Krankheit (Mousetracking with RFID in a transgenic animal model of Alzheimer’s disease). Institute for Geoinformatics, University of

Münster, Germany. In cooperation with Institute of Neuro and Behavioural Biology, University of Münster, Germany.

13. Swobodzinski, M. (2006): Route calculation constraints for an indoor navigation service for the blind. Institute for Geoinformatics, University of Münster, Germany.
14. Lautenschütz, A.-K. (2006): Spatial Relations – The influence of scale, context and spatial relation in linguistic topology. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Ordnance Survey, U.K.
15. Wilmes, T. (2005): Technische Nutzbarkeitsanalyse von Triggered Location Services in zellulären Netzen (Technical usability analysis of Triggered Location Services in cellular networks). Institute for Geoinformatics, University of Münster, Germany.
16. Tomberge, P. (2005): Navigation mittels RFID - Navigationsmöglichkeiten durch RFID-Eintrittskarten bei der WM 2006 (Navigation with RFID – navigation solutions through RFID tickets at the 2006 FIFA World Cup in Germany). Institute for Geoinformatics, University of Münster, Germany.
17. Kessler, C. (2004): Design and implementation of argumentation maps. Institute for Geoinformatics, University of Münster, Germany. In cooperation with Department of Geography, University of Toronto, Canada.
18. *Grüning, D. (2004): Ein Werkzeug zur automatischen Ontologie-Übertragung zwischen Haskell und UML (A tool for automatic ontology-transfer between Haskell and UML). Institute for Geoinformatics, University of Münster, Germany.
19. Redbrake, D. (2003): Ontology-driven wrappers for navigation services. Institute for Geoinformatics, University of Münster, Germany.

Master's committee member

1. Wiehr, F. (2016): Passively Collecting Location and Activity Data for measuring Spatial Familiarity. Department of Computer Science, Saarland University, Germany.
2. Baglatzi, A. (2012): Semantic Transformations Between Land Cover Classification Systems. Institute for Geoinformatics, University of Münster, Germany.
3. Currier, K. (2011): Auditory Representation in Spatial Applications. Department of Geography, University of California, Santa Barbara, U.S.A.
4. Burte, H. (2011): Individual Differences in Spatial Knowledge Acquisition: The Interaction Between Sense of Direction and Attention While Learning Real-World Environments. Department of Geography, University of California, Santa Barbara.

Publications

Articles in Refereed Journals

1. P. Kiefer, I. Giannopoulos, **M. Raubal**, and A. Duchowski (2017) Eye tracking for spatial research: Cognition, computation, challenges. *Spatial Cognition & Computation* 17(1-2): 1-19.

2. P. Kiefer, I. Giannopoulos, V. Anagnostopoulos, J. Schöning, and **M. Raubal** (forthcoming) Controllability Matters: The User Experience of Adaptive Maps. *GeoInformatica*.
3. C. Sailer, P. Kiefer, J. Schito, and **M. Raubal** (2016) Map-based Visual Analytics of Moving Learners. *International Journal of Mobile Human Computer Interaction* 8(4): 1-28.
4. Y. Yuan and **M. Raubal** (2016) Exploring Georeferenced Mobile Phone Datasets - A Survey and Reference Framework. *Geography Compass* 10(6): 239-252.
5. Y. Yuan and **M. Raubal** (2016) Analyzing the distribution of human activity space from mobile phone usage - An individual and urban-oriented study. *International Journal of Geographical Information Science* 30(8): 1594-1621.
6. F. Veronesi, S. Grassi, and **M. Raubal** (2016) Statistical learning approach for wind resource assessment. *Renewable & Sustainable Energy Reviews*.
7. A. Korfiati, C. Gkonos, F. Veronesi, A. Gaki, S. Grassi, R. Schenkel, S. Volkwein, **M. Raubal**, and L. Hurni (2016) Estimation of the Global Solar Energy Potential and Photovoltaic Cost with the use of Open Data. *International Journal of Sustainable Energy Planning and Management* 9: 17-30.
8. P. Weiser, S. Scheider, D. Bucher, P. Kiefer, and **M. Raubal** (2016) Towards sustainable mobility behavior: research challenges for location-aware information and communication technology. *GeoInformatica* 20: 213-239.
9. R. Ahas, A. Aasa, Y. Yuan, **M. Raubal**, Z. Smoreda, Y. Liu, C. Ziemlicki, M. Tiru, and M. Zook (2015) Everyday space–time geographies: using mobile phone-based sensor data to monitor urban activity in Harbin, Paris, and Tallinn. *International Journal of Geographical Information Science* 29(11): 2017–2039.
10. I. Giannopoulos, J. Schöning, A. Krüger, and **M. Raubal** (2014) Attention as an Input Modality for Post-WIMP Interfaces Using the viGaze Eye Tracking Framework. *Multimedia Tools and Applications*.
11. Y. Yuan and **M. Raubal** (2014) Measuring similarity of mobile phone user trajectories - a Spatio-temporal Edit Distance method. *International Journal of Geographical Information Science* 28(3): 496-520.
12. S. Grassi, S. Junghans, and **M. Raubal** (2014). Assessment of the wake effect on the energy production of onshore wind farms using GIS. *Applied Energy* 136, 827-837.
13. P. Kiefer, I. Giannopoulos, and **M. Raubal** (2014) Where am I? Investigating map matching during self-localization with mobile eye tracking in an urban environment. *Transactions in GIS* 18(5): 660-686.
14. **M. Raubal**, G. Jacquez, J. Wilson, and W. Kuhn (2013) Synthesizing population, health, and place. *Journal of Spatial Information Science* 2013(7): 103-108.
15. Y. Yuan, **M. Raubal**, and Y. Liu (2012) Correlating Mobile Phone Usage and Travel Behavior - A Case Study of Harbin, China. *Computers, Environment and Urban Systems*. 36(2): 118-130.
16. K. Janowicz, **M. Raubal**, and W. Kuhn (2011) The Semantics of Similarity in Geographic Information Retrieval. *Journal of Spatial Information Science* (2): 29-57.
17. **M. Raubal** and B. Adams (2010) The Semantic Web Needs More Cognition. *Semantic Web* 1(1-2): 69-74.

18. M. Espeter and **M. Raubal** (2009) Location-based decision support for user groups. *Journal of Location Based Services* 3(3): 165-187.

19. M. Swobodzinski and **M. Raubal** (2009) An Indoor Routing Algorithm for the Blind: Development and Comparison to a Routing Algorithm for the Sighted. *International Journal of Geographical Information Science* 23(10): 1315-1343.

20. E. Pultar, **M. Raubal**, T. Cova, and M. Goodchild (2009) Dynamic GIS Case Studies: Wildfire Evacuation and Volunteered Geographic Information. *Transactions in GIS* 13(s1): 85-104.

21. **M. Raubal** (2009) Cognitive Engineering for Geographic Information Science. *Geography Compass* 3(3): 1087–1104.

22. K. Janowicz, **M. Raubal**, A. Schwering, and W. Kuhn (2008) Semantic Similarity Measurement and Geospatial Applications (Editorial). *Transactions in GIS* 12(6): 651-659.

23. **M. Raubal**, S. Winter, S. Teßmann, and C. Gaisbauer (2007) Time geography for ad-hoc shared-ride trip planning in mobile geosensor networks. *ISPRS Journal of Photogrammetry and Remote Sensing*. 62(5): 366-381.

24. M. Kritzler, **M. Raubal**, and A. Krüger (2007) A GIS framework for spatio-temporal analysis and visualization of laboratory mice tracking data. *Transactions in GIS.* 11(5): 765-782.

25. W. Kuhn, **M. Raubal,** and P. Gärdenfors (2007) Cognitive Semantics and Spatio-Temporal Ontologies (Editorial). *Spatial Cognition and Computation* 7(1): 3-12.

26. C. Rinner and **M. Raubal** (2004) Personalized Multi-Criteria Decision Strategies in Location-Based Decision Support. *Journal of Geographic Information Sciences* 10(2): 149-156.

27. **M. Raubal**, H. Miller, and S. Bridwell (2004) User-Centred Time Geography For Location-Based Services. *Geografiska Annaler B* 86(4): 245-265.

28. C. Nothegger, S. Winter, and **M. Raubal** (2004) Selection of Salient Features for Route Directions. *Spatial Cognition and Computation* 4(2): 113-136.

29. **M. Raubal** and W. Kuhn (2004) Ontology-Based Task Simulation. *Spatial Cognition and Computation* 4(1): 15-37.

30. **M. Raubal** (2001) Human wayfinding in unfamiliar buildings: a simulation with a cognizing agent. *Cognitive Processing* (2-3): 363-388.

31. A. Frank and **M. Raubal** (2001) GIS Education Today: From GI Science to GI Engineering. *Journal of the Urban and Regional Information Systems Association (URISA)* 13(2): 5-10.

32. **M. Raubal** (2001) Ontology and epistemology for agent-based wayfinding simulation. *International Journal of Geographical Information Science* 15(7): 653-665.

33. A. Frank and **M. Raubal** (1999) Formal Specifications of Image Schemata - A Step to Interoperability in Geographic Information Systems. *Spatial Cognition and Computation* 1(1): 67-101.

34. **M. Raubal** and M. Egenhofer (1998) Comparing the complexity of wayfinding tasks in built environments. *Environment & Planning B* 25(6): 895-913.

35. **M. Raubal**, B. Gaupmann, and W. Kuhn (1997) Teaching Raster GIS Operations with Spreadsheets. *Journal of Geography* 96(5): 258-263.

Refereed Full Papers in Conference Proceedings

1. D. Bucher, D. Jonietz, and **M. Raubal** (2016) A Heuristic for Multi-modal Route Planning. in: G. Gartner and H. Huang (Eds.), *Progress in Location-Based Services 2016*. pp. 211-229, Springer.
2. D. Rudi, I. Giannopoulos, P. Kiefer, C. Peier, and **M. Raubal** (2016) Interacting with Maps on Optical Head-Mounted Displays. Spatial User Interaction (SUI) 2016, Oct 15-16. Tokyo, Japan, ACM Press.
3. P. Kiefer, I. Giannopoulos, A. Duchowski, and **M. Raubal** (2016) Measuring Cognitive Load for Map Tasks Through Pupil Diameter. in: J. Miller, D. O'Sullivan, and N. Wiegand (Eds.), *Geographic Information Science - 9th International Conference, GIScience 2016, Montreal, QC, Canada, September 27-30, 2016. Proceedings*. *Lecture Notes in Computer Science* 9927, pp. 323-337, Springer, Switzerland.
4. D. Bucher, F. Cellina, F. Mangili, **M. Raubal**, R. Rudel, A. Rizzoli, and O. Elabed (2016) Exploiting Fitness Apps for Sustainable Mobility - Challenges Deploying the GoEco! App. 4th International Conference on ICT for Sustainability (ICT4S 2016). Amsterdam, Atlantis Press. 89-98.
5. H. Miller, **M. Raubal**, and Y. Jaegal (2016) Measuring space-time prism similarity via temporal profile curves. in: T. Sarjakoski, M. Santos, and T. Sarjakoski (Eds.), *AGILE 2016 - Geospatial Data in a Changing World*. *Lecture Notes in Geoinformation and Cartography* pp. 51-66, Springer.
6. C. Sailer, J. Schito, P. Kiefer, and **M. Raubal** (2015) Teachers Matter: Challenges of Using a Location-Based Mobile Learning Platform. in: T. H. Brown and H. J. van der Merwe (Eds.), *The Mobile Learning Voyage - From Small Ripples to Massive Open Waters - 14th World Conference on Mobile and Contextual Learning, mLearn 2015 Venice, Italy, October 17–24, 2015, Proceedings*. *Communications in Computer and Information Science* 560, pp. 239-255, Springer, Heidelberg, New York.
7. I. Giannopoulos, P. Kiefer, and **M. Raubal** (2015) GazeNav: Gaze Based Pedestrian Navigation. in: *MobileHCI, 17th International Conference on Human-Computer Interaction with Mobile Devices and Services*. Copenhagen, Denmark, ACM.
8. D. Allemann and **M. Raubal** (2015) Usage Differences Between Bikes and E-Bikes. in: F. Bacao, M. Santos, and M. Painho (Eds.), *AGILE 2015 - Geographic Information Science as an Enabler of Smarter Cities and Communities*. *Lecture Notes in Geoinformation and Cartography* pp. 201-217, Springer, Heidelberg.
9. F. Veronesi, S. Grassi, **M. Raubal**, and L. Hurni (2015) Statistical Learning Approach for Wind Speed Distribution Mapping: The UK as a Case Study. in: F. Bacao, M. Santos, and M. Painho (Eds.), *AGILE 2015 - Geographic Information Science as an Enabler of Smarter Cities and Communities*. *Lecture Notes in Geoinformation and Cartography* pp. 165-180, Springer, Heidelberg.
10. I. Giannopoulos, P. Kiefer, **M. Raubal**, K.-F. Richter, and T. Thrash (2014) Wayfinding Decision Situations: A Conceptual Model and Evaluation. in: M. Duckham, E. Pebesma, K. Stewart & A. Frank (Eds.), *Geographic Information Science - 8th International Conference, GIScience 2014, Vienna, Austria, September 24-26, 2014. Proceedings.* Lecture Notes in Computer Science 8728, pp. 221-234, Springer, Berlin.

11. B. Adams and **M. Raubal** (2014) Identifying Salient Topics for Personalized Place Similarity. in: S. Winter and C. Rizos (Eds.), *Research@Locate'14*, Canberra, Australia, pp. 1-12.

12. S. Grassi, R. Friedli, M. Grangier, and **M. Raubal** (2014) A GIS-Based Process for Calculating Visibility Impact from Buildings During Transmission Line Routing. in: J. Huerta, S. Schade, and C. Granell (Ed.), *Connecting a Digital Europe Through Location and Place*. *Lecture Notes in Geoinformation and Cartography* pp. 383-402, Springer, Heidelberg.

13. S. Grassi, S. Junghans, and **M. Raubal** (2013) Estimating Mean Annual Energy Production of Clustered Wind Turbines with GIS. in: *International Conference on Applied Energy, ICAE 2013*, Pretoria, South Africa.

14. I. Giannopoulos, P. Kiefer, and **M. Raubal** (2012) GeoGazemarks: Providing Gaze History for the Orientation on Small Display Maps. *ICMI '12, International Conference On Multimodal Interaction, October 22 - 26, 2012.* Santa Monica, CA, USA, ACM.

15. Y. Yuan and **M. Raubal** (2012) Extracting dynamic urban mobility patterns from mobile phone data. in: *Geographic Information Science - Seventh International Conference, GIScience 2012, Columbus, Ohio, USA, Sep. 18-21 2012, Proceedings.* Lecture Notes in Computer Science pp. 354-367 Springer, Berlin.

16. B. Hecht, S. Carton, M. Quaderi, J. Schöning, **M. Raubal**, D. Gergle, and D. Downey (2012) Explanatory Semantic Relatedness and Explicit Spatialization for Exploratory Search. *SIGIR 2012, 35th Annual SIGIR (Special Interest Group on Information Retrieval) Conference, August 12–16, 2012.* Portland, Oregon, USA, ACM.

17. K.-F. Richter, D. Dara-Abrams, and **M. Raubal** (2010) Navigating and Learning with Location Based Services: A User-Centric Design. *7th International Symposium on LBS & TeleCartography.* G. Gartner and Y. Li. (Eds.). Guangzhou, China, pp. 261-276.

18. K. Janowicz, B. Adams, and **M. Raubal** (2010) Semantic Referencing - Determining Context Weights for Similarity Measurement. in: S. Fabrikant, T. Reichenbacher, M. van Kreveld, and C. Schlieder (Eds.), *Geographic Information Science - Sixth International Conference, GIScience 2010, Zürich, Switzerland, Sep. 14-17 2010, Proceedings.* Lecture Notes in Computer Science 6292, pp. 70-84, Springer, Berlin.

19. **M. Raubal** and S. Winter (2010) A Spatio-Temporal Model Towards Ad-Hoc Collaborative Decision-Making. in: M. Painho, M. Santos, and H. Pundt (Eds.), *Geospatial Thinking.* Lecture Notes in Geoinformation and Cartography pp. 279-297, Springer, Berlin, Heidelberg.

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2. **M. Raubal** (2014) GIS for Renewable Energy. ISPRS International Journal of Geo-Information. http://www.mdpi.com/journal/ijgi/special_issues/renewable-energy-ijgi
3. K. Janowicz, **M. Raubal**, A. Schwering, and W. Kuhn (2008) Semantic Similarity Measurement and Geospatial Applications. Transactions in GIS. 12(6).
4. W. Kuhn, **M. Raubal,** and P. Gärdenfors (2007) Cognitive Semantics and Spatio-Temporal Ontologies. Spatial Cognition and Computation. 7(1).

Workshop Proceedings edited

1. P. Kiefer, I. Giannopoulos, **M. Raubal**, and A. Krüger, Eds. (2014) *Proceedings of the 2nd International Workshop on Eye Tracking for Spatial Research (ET4S 2014), Vienna, Austria, September 23, 2014*: http://ceur-ws.org/Vol-1241/.
2. P. Kiefer, I. Giannopoulos, **M. Raubal**, and M. Hegarty, Eds. (2013) *Eye Tracking for Spatial Research - Proceedings of the 1st International Workshop in conjunction with COSIT '12*. Scarborough, UK.
3. K. Janowicz, **M. Raubal**, A. Krüger, and C. Keßler, Eds. (2011) Proceedings of the Workshop on Cognitive Engineering for Mobile GIS 2011 (CEMob2011). Vol. 780. CEUR Workshop Proceedings, http://sunsite.informatik.rwth-aachen.de/Publications/CEUR-WS/Vol-780/.

Book reviews

1. **M. Raubal** (2010) Book review of 'Virtual geographic environments', edited by Hui Lin and Michael Batty, Beijing, China, Science Press, 2009. *Annals of GIS* 16(1): 67-68.

Theses

1. **M. Raubal** (2001) Agent-based Simulation of Human Wayfinding: A Perceptual Model for Unfamiliar Buildings. Ph.D. Thesis, Vienna University of Technology, Vienna.
2. **M. Raubal** (1997) *Structuring Wayfinding Tasks with Image Schemata*. Master Thesis, Department of Spatial Information Science and Engineering, University of Maine, U.S.A.

Presentations

1. **M. Raubal** (2017) Challenges and opportunities of using geodata in mobility and energy. Launch Event geodata4edu.ch. University of Berne, Switzerland.
2. **M. Raubal** (2017) Location Based Services und Eco-Feedback zur Förderung von nachhaltigem Mobilitätsverhalten. Science & You(th) - Nationale Debatte'17, Mobilität in Städten. Gymnasium Neufeld, Bern, Switzerland.
3. **M. Raubal** (2017) Trends der Geografischen Informationswissenschaft. Festveranstaltung 25 Jahre CAS RIS/GIS. ETH Hönggerberg, Zurich, Switzerland.
4. **M. Raubal** (2016) Location Based Services und Eco-Feedback zur Förderung von nachhaltigem persönlichem Mobilitätsverhalten. mobility-forum.org | science & technics (16. Automotive Day). Bern, Switzerland.
5. **M. Raubal** (2016) Gaze-based assistance for wayfinders in the real world. INNOLEC Lecture. Faculty of Science, Masaryk University, Brno, Czech Republic.
6. **M. Raubal** (2016) Integration, Operation and Optimization of Mobility Systems. 3rd Annual Conference SCCER Mobility, ETH Zurich, Switzerland.
7. **M. Raubal** (2016) Novel approaches to pedestrian wayfinding. Opponent presentation on PhD thesis by Jana Götze, School of Computer Science and Communication. KTH Stockholm, Sweden.
8. **M. Raubal** (2016) Optimizing mobility systems – a spatial and user perspective. Workshop on Energy Futures - Europe and North America. ETH Zurich, Switzerland.
9. **M. Raubal** (2016) Investigating human behavior through big spatial data. Keynote at GIS Ostrava 2016 – The Rise of Big Spatial Data. Ostrava, Czech Republic.
10. **M. Raubal** (2016) Supporting mobile decision-making in urban environments. Media Computing Group, RWTH Aachen. Aachen, Germany.
11. **M. Raubal** (2016) Supporting mobile decision-making in urban environments. Expertise centre for Digital Media, Hasselt University. Hasselt, Belgium.
12. **M. Raubal** (2015) Investigating human behavior in urban environments. Think Spatial - The UCSB Brownbag Forum on Spatial Thinking, Center for Spatial Studies, University of California, Santa Barbara. Santa Barbara, CA, USA.
13. **M. Raubal** (2015) Investigating human behavior in urban environments. CURA (Center for Urban and Regional Analysis) Speaker Series, The Ohio State University. Columbus, OH, USA.
14. **M. Raubal** (2015) GoEco! A community based eco-feedback approach to promote sustainable personal mobility styles. SCCER Mobility | Weiterbildungstag BAV, Abteilung Politik; Energiestrategie 2050: Implikationen für ÖV und Infrastrukturentwicklung. Zürich, Switzerland.

15. **M. Raubal** (2015) Vorteile von GIS im Rahmen der Energiewende. Expertenrunde Runder Tisch GIS: 3D-GIS - Grundlage für die Energiewende? Landesamt für Digitalisierung, Breitband und Vermessung, Munich, Germany.
16. **M. Raubal** (2014) Mobility & Energy – GI Scientists: working to solve global challenges! Institute for Geoinformatics, 20th Anniversary Symposium. University of Münster, Germany.
17. **M. Raubal** (2014) The AGILE Perspective on Geocapacity Building. Geospatial World Forum Pre-Conference Geocapacity. Geneva, Switzerland.
18. **M. Raubal** (2013) Mobile eye-tracking for spatial research. GI Forum, Institute for Geoinformatics, University of Münster. Münster, Germany.
19. **M. Raubal** (2013) GIScience & Mobility. Keynote at SAGEO'13. Brest, France.
20. **M. Raubal** (2013) Mobile eye-tracking for spatial research. CartoTalks, Vienna University of Technology. Vienna, Austria.
21. **M. Raubal** (2013) Geoinformations-Engineering und Mobilität. Geodätisches Kolloquium, Technische Universität Dresden. Dresden, Germany.
22. **M. Raubal** (2013) Computationally-Based Geoinformation Engineering Research. Workshop on Common Challenges in Computationally-Based Engineering Research. ETH Zürich, Switzerland.
23. **M. Raubal** (2013) Mobilität und Energie - Geoinformations-Engineering zur Lösung gesellschaftlicher Herausforderungen. Keynote at 10 Jahre Esri User Forum Schweiz. Zürich, Switzerland.
24. I. Giannopoulos and **M. Raubal** (2013) Mobile Outdoor Gaze-Based GeoHCI. Geographic Human-Computer Interaction (GeoHCI) Workshop. Paris, France.
25. **M. Raubal** (2013) Mobile eye-tracking in Geoinformation Engineering. Eye-tracking Workshop. ETH Zürich, Switzerland.
26. **M. Raubal** (2012) GIScience & Mobility. Z_GIS, TechnologieZentrum Salzburg, Austria.
27. **M. Raubal** (2012) Socially informed location-based knowledge discovery. Keynote at Mobile Tartu 2012. University of Tartu, Estonia.
28. **M. Raubal** (2012) An Extended Theory of Affordances and Its Applications. Workshop on Space and Its Affordances. University of Southern Denmark Kolding.
29. B. Adams and **M. Raubal** (2012) Formalizing Conceptual Spaces for Web Semantics. Conceptual Spaces at Work. Lund University, Sweden.
30. **M. Raubal** (2012) Wozu Geoinformation? Entscheidungsunterstützung für den mobilen Menschen. Introductory Lecture. ETH Zurich, Switzerland.
31. **M. Raubal** (2012) Mobile räumliche Entscheidungsunterstützung. SOGI (Swiss Organisation for Geographic Information) Feierabend Forum. Schlieren, Switzerland.
32. **M. Raubal** (2011) Socially informed location-based knowledge discovery. Copenhagen Center for Computational Social Science Inaugural Workshop. University of Copenhagen, Denmark.
33. **M. Raubal** (2011). What's special about mobile decision-making? National Centre for Geocomputation (NCG) Seminar Series. NUI Maynooth, Ireland.
34. **M. Raubal** (2011) Going Mobile: Location Based Services and Mobile Decision-making. IRL (Innovative Retail Laboratory) Forum, German Center for Artificial Intelligence. Saarbrücken, Germany.
35. **M. Raubal** (2011) Supporting the geocrowd: mobile decision-making, network integration, and more. GEOCROWD Workshop, Challenges in Geospatial Knowledge Management. University of Bremen, Germany.
36. **M. Raubal** (2011) Going Mobile: Location Based Services and Mobile Decision-making. GIScience-Colloquium. Department of Geography, University of Zurich, Switzerland.

37. **M. Raubal** (2010) Geoinformation Engineering for our mobile lives. ASCINA (Austrian Scientists and Scholars in North America) Colloquium. Los Angeles, CA, USA.
38. **M. Raubal** (2010) Campus- and Community-Based Projects for GIS Applications. Green Campus and UCSB Sustainability Program, Forum on Developing Campus and Community Partnerships for Project-Based Courses. University of California, Santa Barbara, USA.
39. **M. Raubal** (2010) Going mobile: The need for research on mobile decision-making. Las Navas 2010: 20th Anniversary Meeting on Cognitive and Linguistic Aspects of Geographic Space. Las Navas del Marques, Avila, Spain.
40. **M. Raubal** (2010) Enhancing Mobile Decision-Making through Cognitive Engineering. Int. Symposium Cognitive Systems Engineering: Spatial Competence in Assistance - Training - Procedures. Etelsen Castle, Germany.
41. **M. Raubal** (2010) A Spatio-Temporal Model Towards Ad-Hoc Collaborative Decision-Making. AGILE'10. Guimarães, Portugal.
42. **M. Raubal** (2010) Time Geography for Movement Research. Workshop on Movement Research, AGILE'10. Guimarães, Portugal.
43. **M. Raubal** (2010) Mobile Geoinformatics. Colloquium Spatial Information Engineering. Swiss Federal Institute of Technology (ETH), Zurich, Switzerland.
44. **M. Raubal** (2009) Spatial Cognitive Engineering, US Department of Transportation visit. Center for Spatial Studies, University of California, Santa Barbara.
45. **M. Raubal** (2009) Mobile Geoinformatik. Geodetic Institute, University of Karlsruhe (TH), Germany.
46. **M. Raubal** (2009) Mobile Geoinformatics and Geosensors. Annual review by Senior Program Manager for Terrestrial Sciences, Environmental Sciences Division, Army Research Office US Army Research Laboratory. Department of Geography, University of California, Santa Barbara.
47. **M. Raubal** (2009). Decentralized Time Geography for Ad-Hoc Collaborative Planning. Conference on Spatial Information Theory, COSIT'09. Aber Wrac'h, France.
48. **M. Raubal** (2009) Decentralized Time Geography for Ad-Hoc Collaborative Planning. GI Forum. Institute for Geoinformatics, University of Münster, Germany.
49. **M. Raubal** (2009) Personalized Location-Based Services. StratAG (Strategic Research in Advanced Geotechnologies) LBS Strand Kick-off Meeting. Maynooth, Ireland.
50. **M. Raubal** (2009) Cognitive Ontology Engineering. AAG Annual Meeting. Las Vegas, NV, U.S.A.
51. **M. Raubal** (2009) Cognitive Engineering for Geographic Information Science. Think Spatial—UCSB brown-bag forum on spatial thinking. University of California, Santa Barbara.
52. **M. Raubal** (2008) Personalized Location-Based Services. Media Arts and Technology / Computer Science Seminar Series. University of California, Santa Barbara.
53. **M. Raubal** (2008) Personalisierung von mobilen Geoinformationsdiensten. Department of Geography, University of Heidelberg, Germany.
54. **M. Raubal** (2008) A Formal Model for Mobile Map Adaptation. 5th LBS & Telecartography Symposium. Salzburg, Austria.
55. **M. Raubal** (2008) Personalized Location-Based Services. University of Redlands/ESRI Colloquium Series. ESRI, Redlands, CA, U.S.A.
56. **M. Raubal** (2008) Representing Concepts in Time. International Conference Spatial Cognition 2008. Freiburg, Germany.
57. **M. Raubal** (2008) Cognitive Modeling With Conceptual Spaces. Workshop on Cognitive Models in Human Spatial Reasoning (CMHSR-08). Freiburg, Germany.
58. **M. Raubal** (2008) Formal conceptual spaces. Reference Systems guest lecture. Institute for Geoinformatics, University of Muenster, Germany.

59. **M. Raubal** (2008) Representing conceptual change. MUSIL Brown bag series. Institute for Geoinformatics, University of Muenster, Germany.
60. **M. Raubal** (2008) Geometry for Semantic Similarity Measurement. AAG Annual Meeting. Boston, MA, U.S.A.
61. **M. Raubal** (2008) Time Geography for Ad-Hoc Shared-Ride Trip Planning. UCTC 2008, 14th University of California Transportation Center student conference. University of California at Santa Barbara.
62. **M. Raubal** (2007) Cognitive aspects in GIScience. Interdisciplinary Cognitive Science Seminar. Department of Psychology, University of California at Santa Barbara.
63. **M. Raubal** (2007). Auf dem Weg zur Voll-Professur: Ein gewagter Sprung über den Atlantik? 4th Junior Professor Symposium. University of Bremen, Germany.
64. **M. Raubal** (2007). Representing concepts in time. SFB/TR 8 Spatial Cognition / IQN Colloquium. Cognitive Systems, University of Bremen, Germany.
65. **M. Raubal** (2007) Personalization of Geographic Information. Geography Colloquium. Department of Geography, State University of San Diego, CA, U.S.A.
66. **M. Raubal** (2007) Representing geographic concepts in time. AAG Annual Meeting. San Francisco, CA, U.S.A.
67. **M. Raubal** (2007) Simulating ad-hoc shared-ride trip planning in mobile geosensor networks. Geography Colloquium. Department of Geography, University of California at Santa Barbara.
68. **M. Raubal** (2006) Was ist Geoinformatik? Forschungsgebiete, Studieninhalte und Berufsfelder. Hochschultag 2006. Universität Münster, Germany.
69. **M. Raubal** (2006) Personalization of Geographic Information. Department of Geography, Ryerson University, Toronto, Canada.
70. **M. Raubal** (2006) Cogito ergo mobilis sum: Der kognitive Mensch in Raum und Zeit. Antrittsvorlesung. University of Muenster, Germany.
71. **M. Raubal** (2006) Agent-Based Simulation of Human Wayfinding: A Perceptual Model for Unfamiliar Buildings. Dagstuhl Seminar on Affordance-Based Robot Control. Dagstuhl Castle, Germany.
72. **M. Raubal** (2006) Effiziente Planung von kurzfristigen Mitfahrgelegenheiten. Habilitationsvortrag. Fachbereich Geowissenschaften, Universität Münster, Germany.
73. **M. Raubal** (2006) Time Geography for Ad-Hoc Shared-Ride Trip Planning. 7th International Conference on Mobile Data Management (MDM'06). Nara, Japan.
74. **M. Raubal** (2006) Location-Based Decision Services - eine neuartige Form mobiler räumlicher Entscheidungsunterstützung. 9. Österreichischer Geodätentag. Krems, Austria.
75. **M. Raubal** (2006) Personalization of Geographic Information. Colloquium Series. Department of Geography, University of California Santa Barbara.
76. **M. Raubal** (2006) Cartographic design - instruction & research directions. Cartographic design class. Department of Geography, University of California Santa Barbara.
77. **M. Raubal** (2005) Mappings for Cognitive Semantic Interoperability. Dagstuhl Seminar on Spatial Cognition: Specialization and Integration. Dagstuhl Castle, Germany.
78. **M. Raubal** and P. Agarwal (2005) Cognitive Engineering for Geospatial Services. COSIT Workshop on "Cognitive Engineering for Geospatial Services". Ellicottville, N.Y., U.S.A.
79. **M. Raubal** (2005) Mappings for Cognitive Semantic Interoperability. Department of Geography, Penn State University, U.S.A.
80. **M. Raubal** (2005) Zeitgeographie als theoretische Grundlage für Location-Based Services. Kolloquium aus Geographie und Regionalforschung. Institut für Geographie, Universität Klagenfurt, Klagenfurt, Austria.

81. **M. Raubal** (2005) Mappings for Cognitive Semantic Interoperability. 8th AGILE conference. Estoril, Portugal.
82. M. Wilde and **M. Raubal** (2004) MEDIS Atlas and Metadata Server – Current State. MEDIS Project meeting. Mondello, Sicily.
83. **M. Raubal** (2004) Personalisierung von geographischer Information. Einführungsvortrag zum Habilitationsverfahren. Institut für Geoinformatik, Münster, Germany.
84. **M. Raubal** (2004) Formalizing Conceptual Spaces. Conference on Formal Ontology in Information Systems, FOIS 2004. Torino, Italy.
85. **M. Raubal** (2004) Multi-Criteria Decision Analysis for Location Based Services. Geoinformatics 2004, 12th International Conference on Geoinformatics. Gävle, Sweden.
86. **M. Raubal** (2004) Cognitive Engineering. Euresco on methods to support interaction in geovisualisation environments. Kolymbari, Crete, Greece.
87. **M. Raubal** and M. Lutz (2004) Modeling and Managing the Semantics of Geospatial Data and Services. NCGIA Specialist Meeting on Spatial Webs. Santa Barbara, CA, U.S.A.
88. **M. Raubal** (2003) Cognitive Engineering für Geoinformatik. Vortrag im Rahmen der Besetzung einer Juniorprofessur. Institut für Geoinformatik, Universität Münster.
89. **M. Raubal** (2003) Interoperabilität und semantische Referenzsysteme für GIS. Kolloquium aus Geographie und Regionalforschung. Institut für Geographie, Universität Klagenfurt, Klagenfurt, Austria.
90. **M. Raubal** (2003) Agent-Based Simulation of Human Wayfinding: A Perceptual Model for Unfamiliar Buildings. Euresco on Modeling for Wayfinding Services. Bad Herrenalb, Germany.
91. **M. Raubal** (2002) Decision criteria for wayfinding in the real world and the World Wide Web. Department of Geography, University of Utah. Salt Lake City, U.S.A.
92. **M. Raubal** (2002) Agent-based simulation of human wayfinding: A perceptual model for unfamiliar buildings. Department of Geography, University of Utah. Salt Lake City, U.S.A.
93. **M. Raubal** (2002) Enriching Wayfinding Instructions with Local Landmarks. GIScience 2002. Boulder, CO, U.S.A.
94. **M. Raubal** (2001) Orientierungs-Los in Wien!? Wie man in Gebäuden seinen Weg findet, am Beispiel des Flughafens Wien. University Meets Public (UMP). VHS Simmering.
95. **M. Raubal** (2001) Integration of information during wayfinding in an unfamiliar building. Data Fusion and Separation Meeting. Carnuntum, Austria.
96. **M. Raubal** (2001) Human Wayfinding in Unfamiliar Buildings: A Simulation with a Cognizing Agent. Kolloquium Geographische Informationswissenschaft. Geographisches Institut, Universitaet Zuerich, Switzerland.
97. **M. Raubal** (2000) Human wayfinding in unfamiliar buildings: a simulation with cognizing agents. International Conference on Spatial Cognition: Scientific Research and Applications (ICSC 2000). Rome, Italy.
98. **M. Raubal** (2000) Multimodal Communication for Wayfinding: Airports as a Case Study. 4th Swedish Symposium on Multimodal Communication (SSoMC). Stockholm, Sweden.
99. **M. Raubal** (2000) Ontology and epistemology for agent-based wayfinding simulation. EuroConference on Ontology and Epistemology for Spatial Data Standards. La Londe-les-Maures, France.
100. **M. Raubal** (2000) The PANEL-GI Compendium - A Guide to GI and GIS. EUGISES 2000. Budapest, Hungary.
101. **M. Raubal** (2000) Agent-Based Simulation of Human Wayfinding in Buildings. MIT AI Lab, Boston, MA, U.S.A.

102. **M. Raubal** (2000) Research Challenges for Real-Time Navigation Services. GeoPo'2000. Podersdorf, Austria.
103. **M. Raubal** (2000) The PANEL-GI Compendium - A Guide to GI and GIS. International workshop "Geographical Information Infrastructures 2000". Sofia, Bulgaria.
104. **M. Raubal** (2000) Strukturieren von Wegesucheaufgaben mit Hilfe von Image Schemata. FIKUS (Forschungsinstitut Kultur- und Sozialwissenschaften). Vienna, Austria.
105. **M. Raubal** (2000) Specifying a Cognizing Wayfinding Agent. GeoSki. Bad Kleinkirchheim, Austria.
106. **M. Raubal** (1999) Agent-Based Simulation of People's Wayfinding Behavior in Buildings. COSIT '99 - Doctoral Colloquium. Stade, Germany.
107. **M. Raubal** (1999) A Formal Model of the Process of Wayfinding in Built Environments. COSIT '99. Stade, Germany.
108. **M. Raubal** (1999) A Formal Model of the Process of Wayfinding in Built Environments. IFGI Summer Retreat. Nordkirchen, Germany.
109. **M. Raubal** (1999) People's Wayfinding Behavior in the Built Environment. European Research Conference "Socio-Economic Research & Geographic Information Systems". Espinho, Portugal.
110. **M. Raubal** (1998) Specifications for Interoperability: Formalizing Image Schemata for Geographic Space. SDH'98. Vancouver, Canada.
111. **M. Raubal** (1998) Structuring Wayfinding Tasks with Image Schemata. University of Hamburg. Hamburg, Germany.
112. **M. Raubal** (1998) Structuring Wayfinding Tasks with Image Schemata. University of Muenster. Muenster, Germany.
113. **M. Raubal** (1997) Structuring Space with Image Schemata: Wayfinding in Airports as a Case Study. International Conference COSIT'97. Pittsburgh, USA.